

Sustainability Plan

for an Ever-Greener California

Caltrans took steps in 2015 to become a better steward of the environment. The department used less energy, cut its water consumption in half, built carbon-neutral facilities and added more than 100 plug-in vehicles to its fleet.

In December 2015, Caltrans expanded its already ambitious sustainability plan with the adoption of the *2015 Road Map to Achieving Executive Orders B-18-12 and B-16-12* (Road Map), which ties to the year-old *Caltrans Strategic Management Plan* (SMP) and encompasses all Caltrans operations. It incorporates the new *California Department of General Services (DGS) Management Memos*, which implement the governor's executive orders. And most critically, the Road Map includes target dates and identifies those responsible for accomplishing the tasks.

Here's a brief look at how Caltrans is putting each of the executive orders into action:

Executive Order B-18-12: The Green Building Action Plan

This order from 2012 incorporates green practices into building and highway system operations for energy, water, materials and purchasing efficiencies, enhances indoor and outdoor air quality and reduces greenhouse gas (GHG) emissions. As reported in *The Mile Marker* in September 2015, Caltrans reduced its greenhouse gas emissions from its fleet of vehicles, buildings and networks of lights and signals by almost 38 percent from 2010 to 2014, which exceeds the goal for 2020.

Caltrans is also converting its buildings into Zero Net Energy buildings – meaning these buildings through such efficiencies as solar power create as much energy as they use. The goal is for half of all new construction and major renovations to be Zero Net Energy by 2020 and 100 percent by 2025. That same year, half of the department's existing building area, or 3.55 million square feet, would be required to be Zero Net Energy.

continued next page



“... the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions ...”

~Governor Edmund G. Brown

(cont.)

EO B-30-15: Greenhouse Gas Emission Reduction Targets for 2030

The Green Building Action Plan predates EO B-30-15, which established a greenhouse gas reduction target of 40 percent below 1990 levels by 2030 – and hailed by the Governor’s Office as “the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half.” This is one strategy to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. The action plans outlined in the latest Road Map explain how Caltrans will help California meet those goals.

Other substantial programs were established in 2015 to help Caltrans meet greenhouse gas emissions goals. They include the [Active Transportation Program](#) (updated), [Class IV Bikeways](#), Complete Streets (see story, [page 12](#)), [Intelligent Transportation Systems](#), [multimodal system planning](#), regional transportation plans and sustainable community strategies.

EO B-16-12: The Zero Emission Vehicles (ZEV) Action Plan

This plan is anticipated to be complete by June 2016. Caltrans, with 118 plug-in fleet vehicles, is already exceeding this executive order, which required that of the new vehicles purchased in 2015, 10 percent had to be electric vehicles and that rate would rise to 25 percent by 2020. To further promote the use of ZEVs, in October 2015, Director Malcolm Dougherty issued a memo directing Caltrans facility managers to encourage employee use of state-owned electric vehicle charging stations.

In the future, Caltrans’ Division of Equipment plans to look beyond the ZEV plan light-duty fleet requirements to incorporate heavy duty ZEVs in Caltrans’ fleet when available, ways to increase ZEV adoption statewide, and other ways to increase the use of low-carbon fuels. A vehicle replacement plan through 2020 will be developed by June.



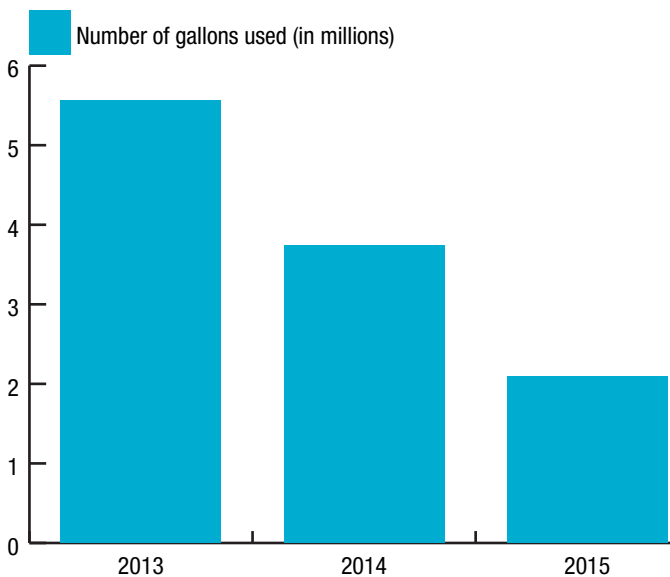
EO B-29-15: Drought State of Emergency

In 2012, EO B-18-12 required 10 percent water reduction by 2015 and 20 percent by 2020 as measured against 2010 levels. In January 2014, Gov. Jerry Brown issued the Drought State of Emergency proclamation. As a result, Caltrans raised the bar in 2014, with Director Dougherty setting a goal of a 50 percent reduction in water use for irrigation and landscaping, and committed to examining all ongoing activities for further efficiencies. Subsequently, EO B-29-15 was handed down by Gov. Jerry Brown in April 25, 2015, to further mandate 25 percent reductions for all urban water users and extended the mandate through February 2016.

Caltrans used many methods to reduce water consumption, including “smart” controller upgrades, prioritizing landscaping projects, streamlining water use tracking, and water conservation and drought action planning in buildings and along highways.

In April 2015, DGS reported that state agencies used 23 percent less water in 2014 compared to 2013. For all state government, water use fell from 19.4 billion gallons in 2013 to 14.9 billion gallons in 2014, and Caltrans accounted for more than half of the water conserved by all state agencies (see [December 2015 article](#)). In 2015, Caltrans achieved a 53 percent reduction in water use, meeting the director’s aggressive goal.

Comparison of water consumption during first three quarters 2013-15:



A 32 percent reduction was achieved between the 2013 and 2014 calendar years, and a 61 percent reduction was achieved comparing 2010 with 2014.

EO B-32-15: Sustainable Freight Action Plan

As ordered in July 2015, the development and implementation of this plan focuses on transitioning to zero-emissions freight technology, freight efficiency improvements and increasing the competitiveness of California’s freight system. Caltrans is working to develop an integrated freight action plan by July 2016 that establishes clear targets to improve freight efficiency, transition to zero-emission technologies and increase competitiveness of California’s freight system to achieve 40 percent below 1990 levels by 2030. A draft “California Sustainable Freight Strategy” was released in February 2016 and encompasses: engines and vehicles; energy and fuels’ freight infrastructure and facilities; funding and incentives; freight system efficiencies; and economy and jobs.

Source: Sustainability Program, Road Map to Achieving Executive Orders B-18-12 & B-16-12

California by the Numbers

Mass Transportation (Bus, rail, ferry, fiscal year 2013–14):	
Passenger trips	1.8 billion
Passenger fares.....	\$1.75 billion
Vehicle miles.....	603 million
Population (as of 2010 Census):	
37,253,956	
Registered vehicles (as of January 1, 2015):	
33,550,486	
Licensed drivers (as of January 1, 2015):	
25,014,468	
Full-time Caltrans employees (as of September 30, 2014):	
18,415	
Adopt-A-Highway adoptions through July 31, 2015:	
2,961	
Vista points:	146
Roadside rest areas:	87